A photograph of three burrowing owls standing in front of a hole in a cracked, reddish-brown soil wall. The owls are small, with light brown and white mottled feathers and large, yellow eyes. They are positioned in the center of the frame, looking directly at the camera. The background is a textured, cracked wall of dry earth.

Burrowing Owl Studies and Monitoring in the Imperial Valley

**Imperial Irrigation District
Water Conservation and Transfer Project**

- Water Conservation and Transfer Project
- Mitigation Requirements Driven By:
 - Draft HCP
 - CDFG 2081
 - SWRCB Order
 - EIR/EIS
- Both Species- and Habitat-Level Mitigation
- Burrowing Owl

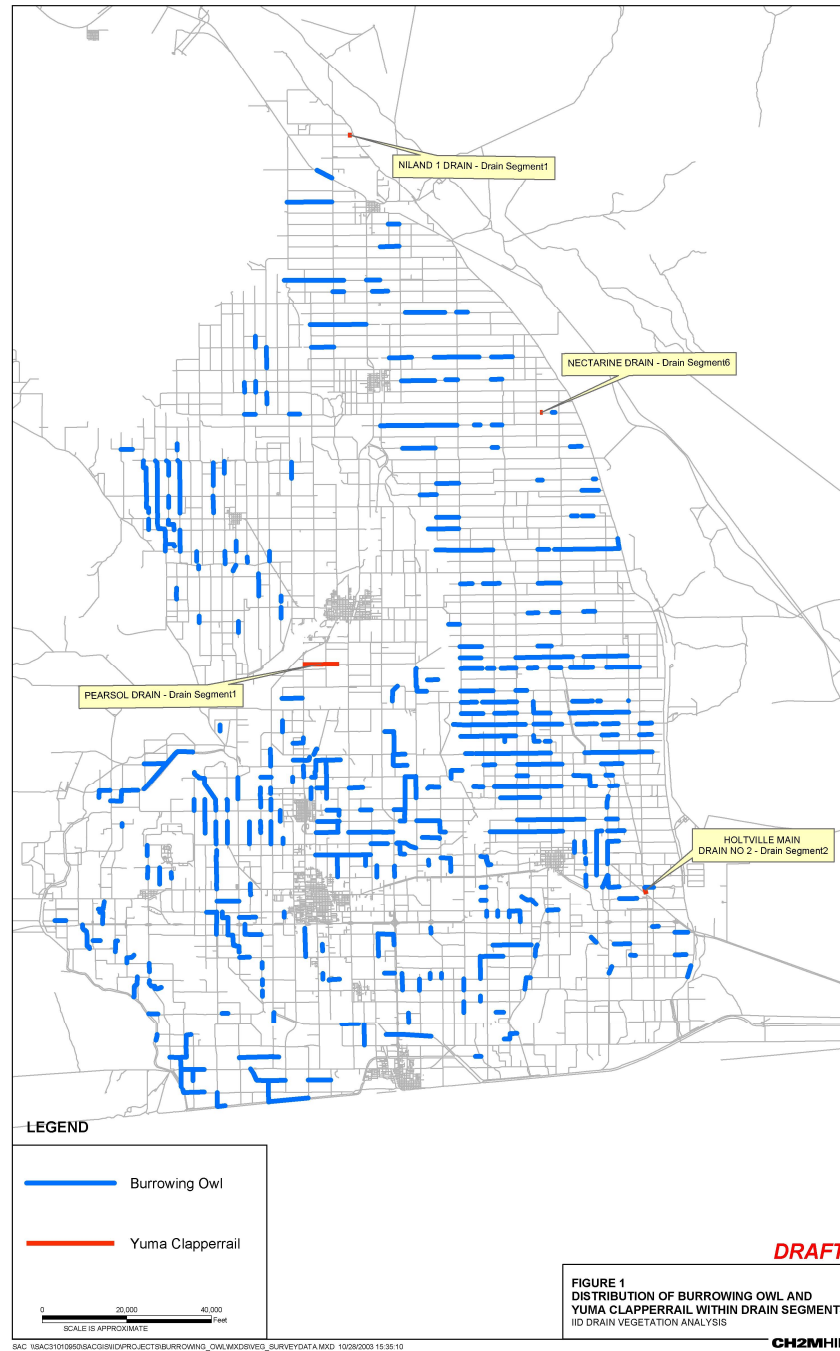
IID Water Infrastructure

- Irrigation Drains
 - Approximately 1450 linear miles
 - Typically unlined, dirt channels
 - 1:1 bank slopes
 - 20% cleaned annually by IID
- Irrigation Canals
 - Approximately 1670 linear miles
 - 70% lined/piped









HCP Burrowing Owl Conservation Strategy

- **Goal:** Maintain a self-sustaining population(s) of Buow across the current range of the species encompassed by the HCP area.
- **Specific Objective:** Maintain adequate burrow availability and community parameters (e.g., burrowing mammals, foraging habitat), to the extent that IID can influence these parameters, at levels to support the baseline distribution and abundance of Buow in the HCP area affected by covered activities.

IID is implementing nine (9) species-specific mitigation processes to minimize impacts to Buow potentially resulting from the WTA. These generally include worker education and impact avoidance/minimization measures.

One measure includes designing and implementing a long-term study to track Buow population(s) within the HCP area. The study has two components:

- 1) Distribution and Abundance Study
- 2) Demographic Study

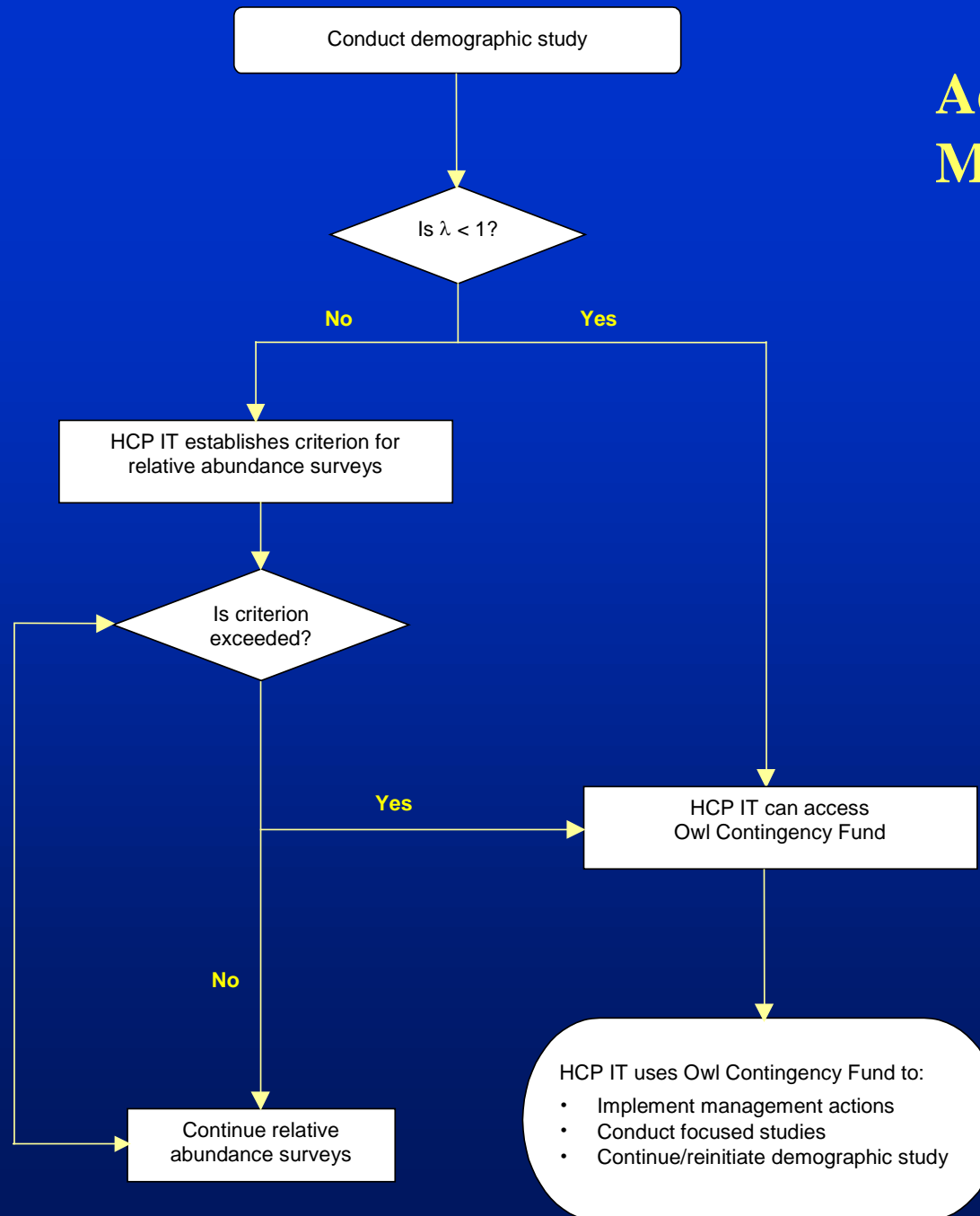
Buow Distribution and Abundance Study

- IID will provide an annual, “valley-wide” perspective of Buow distribution and abundance within the HCP area for the term of the take permit (75 years).
- Effort to focus along drains and canals
- Likely conducted in April-May window
- Data added to project GIS
- Annual reporting
- Data will be used to identify areas for Demographic Study

Buow Demographic Study

- To be initiated following completion of valley-wide D&A survey.
- Owls will be captured, banded, and studied through time
 - Body weight
 - Wing cord
 - Sex
 - Clutch size and nest location
 - Annual population growth rate calculated
- Conducted for a period of 12 to 15 years
- Annual reporting

Adaptive Management



Schedule - Buow

IID is initiating Buow studies prior to timelines required by the HCP/2081. These include:

- Completing the first valley-wide Buow D&A study in spring 2006 rather than by spring 2010
- Potentially initiating the Buow Demographic Study prior to spring 2011

Benefits:

- Contribution to Science
- Fiscal Responsibility

Schedule - Other

IID is also initiating several other studies prior to timelines required by the HCP/2081. These include:

- Purchasing 652 acres of land (for creation of Managed Marsh Habitat) in 2005, rather than by 2015
- Designing and constructing 652 acres of Managed Marsh Habitat in 2005-2010, rather than 2005-2015
- Creating or acquiring Native Tree Habitat prior to impacting tamarisk

Benefits:

- Accelerated Ecological Function
- Contribution to Science
- Fiscal Responsibility

Contacts

- Bruce Wilcox
Imperial Irrigation District
760-339-9756
- John Eckhardt
Imperial Irrigation District
760-339-9736
- Tina Anderholts Shields
Imperial Irrigation District
760-339-9038

Imperial Irrigation District
Water Transfer Project
333 E. Barioni Blvd.
Imperial, CA 92251

QUESTIONS?